

REMARKS

Favorable reconsideration of this application as presently amended is respectfully requested. Claims 26-41 are pending. Claim 41 is withdrawn, and claims 42-49 have been canceled. Applicants reserve the right to file divisional applications for the subject matter covered by the withdrawn and canceled claims.

In the outstanding Office Action, the Examiner (1) objected to the title; (2) rejected claims 36 and 39 under 35 U.S.C. § 112, second paragraph; (2) rejected claims 26, 27 and 32 under 35 U.S.C. § 102(b) as allegedly anticipated by U.S. Patent No. 5,186,046A to Gouterman *et al.* (hereinafter "*Gouterman*") (3) rejected claim 31 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Gouterman*; and (4) Claims 28-30 and 33-40 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Gouterman* in view of Barney *et al.*, U.S. Patent Publication No. 2002/0110180 A1)(hereinafter "*Barney*").

With regard to the title, Applicants have amended the title as suggested by the Examiner and respectfully request that the Examiner reconsider and withdraw the objection to the title.

With regard to the rejection of claims 36 and 39 under 35 U.S.C. §112, second paragraph, Applicants have amended claims 36 and 39. Applicants, accordingly, respectfully request that the rejections under 35 U.S.C. § 112, second paragraph be reconsidered and withdrawn.

With regard to the rejection of independent claim 33 under 35 U.S.C. §103(a), Applicants respectfully request that the Examiner reconsider and withdraw the rejection for at least the following reasons. Independent claim 33 recites as follows:

33. A method of illuminating a rotary blade comprising:
applying a passively charged photoluminescent paint
to a rotary blade; and
sealing said passively charged photoluminescent
paint with a topcoat sealer.

In rejecting claim 33, the Examiner recognized that *Gouterman* fails to teach sealing a passively charged photoluminescent paint with a top coat sealer. Instead, the Examiner asserted that the application of a sealer coat would have been obvious. *See*, Office Action at 5. No support was provided by the Examiner for this statement. Applicants accordingly respectfully submit that the Examiner has failed to establish a *prima facie* obviousness rejection for at least the reason that the Examiner has identified no citation in the prior art disclosing sealing a passively charged photoluminescent paint applied to a rotary blade with a top coat sealer. *See* MPEP 2143.01 (to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *Citing In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)). Applicants accordingly respectfully request that the Examiner withdraw the rejection for at least this reason.

Applicants also respectfully disagree with the Examiner that it would be obvious to apply a top coat sealer to the system disclosed by *Gouterman* for at least the reason that applying a top coat sealer to the system of *Gouterman* would render *Gouterman* unsatisfactory for its intended purpose. *See*, MPEP 2413.01 (If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *Citing, In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984))

Gouterman is directed to a method for measuring the pressure of an oxygen containing gas on an aerodynamic surface by oxygen quenching of luminescence of

molecular sensors. *See, Gouterman* at Abstract. *Gouterman* discloses a method in which an “oxygen-sensitive luminescent film” is applied to a surface for pressure mapping and mapping of the surface. *See, Gouterman* at col. 6 lns. 4-6. This oxygen-sensitive luminescent film is disclosed by *Gouterman* as including luminescent molecules (referred to as “sensors” by *Gouterman*) that have different dependencies on temperature and oxygen pressure. *See, Gouterman* at Abstract and col. 2 lns. 14-18. Further, *Gouterman* discloses that this oxygen-sensitive luminescent film “must be sufficiently oxygen permeable so that an oxygen-containing gas can quench luminescence of the sensors contained in the film during pressure measurements ...” *See, Gouterman* at col. 7 lns 25-31 (emphasis added). The oxygen-sensitive luminescent film is then irradiated while an oxygen-containing gas is in contact with the film. *See, Gouterman* at co. 10 lns 14-16. Because the luminescent molecules are sensitive to oxygen pressure, the intensity of the luminescence of the luminescent molecules can then be detected and processed to determine the pressure of the oxygen-containing gas. *See, Gouterman* at col. 10 lns 16-22.

Accordingly, for the system of *Gouterman* to work for its intended purpose, the oxygen-containing gas must be able to contact the luminescent molecules. Application of a top coat sealer to the luminescent films of *Gouterman*, however, would hinder the oxygen-containing gas from being able to reach the luminescent molecules and thus render the system of *Gouterman* unsatisfactory for its intended purpose. Applicants accordingly respectfully submit that because sealing the luminescent film of *Gouterman* with a top coat sealer would render it unsatisfactory for its intended purpose, the rejection of claim 33 is improper.

Accordingly, Applicants respectfully submit that *Gouterman* neither teaches nor suggests “sealing said passively charged photoluminescent paint with a topcoat sealer,” as

recited by independent claim 33. Applicants, therefore, respectfully request that the Examiner reconsider and withdraw the rejection of claim 33 for at least this reason.

Independent claim 38, as amended, recites, in part, “sealing said passively charged photoluminescent paint with a topcoat sealer.” Applicants, accordingly, respectfully submit that independent claim 38 is allowable over the cited references for at least similar reasons to those discussed above with reference to independent claim 33.

Independent claim 26, as amended, recites, in part, “wherein the photoluminescent paint when activated has an extinction time of greater than or equal to 5.5 hours.” In rejecting claim 26, the Examiner relied on *Gouterman* for allegedly disclosing the application of a photoluminescent paint to a rotor blade. *See*, Office Action at 4. *Gouterman*, however, discloses using a phosphor with a lifetime in the range of 10^{-4} to 10 second. *See*, *Gouterman* at col. 2 lines 8-10. For example, *Gouterman* discloses using a phosphorescent porphyrin with a lifetime of approximately 100 microseconds. Using a photoluminescent paint with an extinction time measured in terms of hours versus one measured in terms of seconds or microseconds would be impractical in the system of *Gouterman*.

Applicants therefore respectfully submit that *Gouterman* fails to teach or suggest “wherein the photoluminescent paint when activated has an extinction time of greater than or equal to 5.5 hours,” as recited by amended independent claim 26. Applicants therefore respectfully request that the Examiner reconsider and withdraw the rejection to claim 26 for at least this reason.

Independent claim 32, as amended, recites, in part, “wherein the photoluminescent paint when activated has an extinction time of greater than or equal to 5.5 hours.”

Applicants accordingly respectfully submit that independent claim 32 is allowable for at least similar reasons to those discussed above with reference to independent claim 26.

Applicants note that in the Conclusion section of the Office Action the Examiner stated that Applicants are required to identify an explicit citation in Applicants' specification supporting any amended limitations. *See*, Office Action at 6. The portions of the MPEP cited by the Examiner, however, include no such requirement, nor has the Examiner identified any federal regulation or statute requiring such an explicit citation. Rather, MPEP §2163.04 places the burden on the Examiner as to whether the written description requirement is met. However, in the interests of expediting the Application, Applicants respectfully identify that, for example, paragraphs 27 and 31 provide support for the amendments to independent claims 26 and 32.

The dependent claims incorporate all of the subject matter of their respective independent claims and add additional subject matter which makes them *a fortiori* independently patentable over the art of record. Accordingly, Applicants respectfully request that the outstanding rejections of the dependent claims be reconsidered and withdrawn for at least this reason.

Additionally, Applicants respectfully note that the Examiner has failed to identify any support in any cited reference for allegedly disclosing the limitations of many of Applicants' dependent claims, such as, for example, dependent claims 28, 29, 30, 35, 37, 39, and 40. Applicants accordingly respectfully request that the Examiner reconsider and withdraw the rejection to these dependent claims for at least this additional reason.

Response to Notice of Non-Compliant Amendment

On February 22, 2007, the Examiner issued a Notice of Non-Compliant Amendment in which the Examiner (1) indicated that the status of claim 41 was

improperly identified; and 2) indicated that a claim amendment fails to satisfy 35 U.S.C. §112, second paragraph.

With regard claim 41, the Examiner indicated in the Notice of Non-Compliant Amendment that claim 41 was withdrawn via a Response to a Restriction Requirement filed on July 18, 2006. This is incorrect. The Response filed on July 18, 2006 elected to prosecute claims 26-42 (identified by the Examiner in the June 19, 2006 Restriction Requirement as Group I). As such, claim 41 was not withdrawn in the July 18, 2006 response but remained pending in the application. In the October 4, 2006 Office Action, the Examiner stated in paragraph 2 that claim 42 should have been identified as belonging to Group II, and apologized for belatedly restricting out claim 42. The Examiner, however, did not make a similar statement regarding claim 41, nor did the Examiner identify any particular group other than the elected Group I to which the Examiner asserted claim 41 belongs.

In the Notice of Non-Compliant Amendment, the Examiner appears to now be asserting that the Examiner's original identification of claim 41 as belonging to Group I was incorrect, and that claim 41 belongs to Group II. Applicants respectfully disagree with the Examiner, but for expediency have withdrawn claim 41 at this time. The Examiner is also kindly requested to specifically identify to which group the Examiner asserts claim 41 belongs.

With regard to the Examiner's rejection under 35 U.S.C. §112, second paragraph, the Examiner stated that the amendments do not satisfy the requirements under 35 U.S.C. §112, second paragraph, because they do not specify an upper limit to the range of time the photoluminescent material is visible.

As an initial matter, Applicants note that this is not the proper subject matter of a Notice of Non-Compliant Amendment. A Non-Compliant Amendment is an amendment that does not satisfy the requirements of 37 C.F.R. 1.21 or 1.4, which deal with matters of form, such as, for example, how amendments are made using strikeouts and underlines. These rules, however, do not govern issues related to statutory rejections, such as, for example, rejections under §102, 103, or §112. As such the Examiner's rejections under 35 U.S.C. §112 are not the proper subject of a Notice of Non-Compliant Amendment.

Further, Applicants respectfully submit that for at least the below stated reasons, the amendment to claim 32 reciting "wherein the photoluminescent paint when activated has an extinction time of greater than or equal to 5.5 hours," satisfies the requirements of 35 U.S.C. §112, second paragraph. Particularly, in the Notice, the Examiner stated the "lack of an upper limit" in this claim amendment renders the claims indefinite. Applicants respectfully disagree with the Examiner.

The Manual of Patent Examination Procedure (MPEP) explicitly acknowledges that the recitation of a range in a claim does not render the claim indefinite and that open-ended ranges are permissible under 35 U.S.C. §112. (*See*, MPEP §2173.05(c).) For example, the MPEP specifically acknowledges that the Board of Patent Appeals has found that open ended claims may satisfy the requirements of 35 U.S.C. §112, second paragraph. (*See*, MPEP §2173.05(c) *citing*, *Ex parte Khusid*, 174 USPQ 59 (Bd. App. 1971).) Moreover, claim limitations with an open-ended upper ranges are commonly recognized as acceptable claim language satisfying the requirements of 35 U.S.C. §112, second paragraph. (*See e.g., Lantech, Inc. v. Keip Mach. Co.*, 32 F.3d 542, 546, 31 USPQ2d 1666, 1670 (Fed.Cir.1994) ("[T]he term 'at least two' sets forth the minimum number of a particular element required."); *Hybritech, Inc. v. Abbott Labs.*, 849 F.2d 1446, 1455, 7 USPQ2d

1191, 1199 (Fed.Cir.1988) (The Federal Circuit found a reasonable likelihood of success of proving that the accused products infringe a patent with a recited claim limitation for affinity of "at least about 10 liters/mole"); Ralston Purina Co. v. Far-Mar-Co, Inc. 772 F.2d 1570, 1576 (C.A.Fed.,1985) (In finding the limitations "at least about 25% by weight," and "at least 25% by weight" allowable, the Federal Circuit stated "The open-ended claims, however, would be limited by what a person skilled in the art would understand to be workable.")

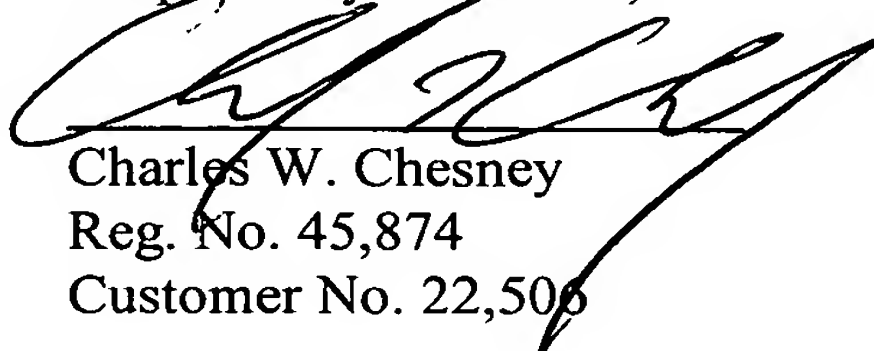
Applicants, accordingly, respectfully submit that the amendment to claim 32 reciting "wherein the photoluminescent paint when activated has an extinction time of greater than or equal to 5.5 hours," satisfies the requirements of 35 U.S.C. §112, second paragraph.

Conclusion

If the Examiner has any questions or concerns regarding the present response, the Examiner is invited to contact Charles W. Chesney at 703-591-2664, Ext. 2004.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance, and favorable action is respectfully solicited.

Respectfully submitted,



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